dred cancer patients all the time and almost without exception within proved cancer strains, this reasonable probability is raised to an almost indisputable fact; and whether or not my strains of housemice have behaved in hybrid crosses in accordance with the established canon has no bearing whatever upon the behavior of cancer. It is an academic dispute which lies in quite another field.

In regard to my use of the terms "dominant" and "recessive" with respect to cancer behavior: it is almost the established conviction to-day that these terms are descriptive and not dynamic, and they furnish in the description of the behavior of cancer in heredity a graphic and convenient tool. That is probably all they furnish in the exposition of any problem in heredity. They may be discarded for even that service within the next few years.

The chief value in the study of cancer of the use of a partial Mendelian background of comparison (although the details may be under dispute) is to show to those most interested how far back in a strain cancer may lie and still be transmitted, and by what sorts of crosses this can be done, and to make it plain that in deciding upon the inheritability of human cancer and of the method of elimination of cancer from a family, one can not take as a criterion of judgment whether or not the immediate parents exhibited cancer.

I do not desire or make a strict Mendelian interpretation of my results, indeed I should deplore such an interpretation. I have used Mendelian comparisons (1) to make clear the influence of a more or less remote ancestry upon later generations of progeny; (2) to show how cancer, like albinism, has been transmitted in my strains through generation after generation by individuals who did not exhibit it; and (3) to demonstrate how cancer thus transmitted finally leaps into expression in the offspring of a pair neither of whom expresses cancer, but both of whom bear it potentially.

The approximation to even the most conservative Mendelian expectation is strikingly close for such a characteristic as cancer.

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SCIENTIFIC BOOKS

The Mathematical Theory of Investment. By E. B. Skinner. Boston, Ginn and Company, 1913. Pp. ix + 245.

Skinner's Theory of Investment is divided into four parts: 1. Algebraic Introduction. 2. Interest and Annuities. 3. Probability and Its Applications to Financial Problems. 4. Tables.

The Algebraic Introduction gives a sketch of arithmetic and geometric progressions, limits, series in general (with particular emphasis upon the binominal, exponential and logarithmic series), logarithms and graphical representation.

In the discussion of Interest and Annuities, the old standard problems are taken up, including such applications as amortization, the valuation of bonds, sinking funds, depreciation, building and loan associations.

In the third part a short introduction to the theory of probability precedes the discussion of life annuities and some other problems in life insurance.

There are 12 tables, mostly 7 place, for dealing with interest (simple or compound), discounts, and present values, annuities, and life insurance data.

This work is elementary, clearly written and satisfactory throughout for a general introduction to the problems with which it deals. In regard to insurance, one finds just about enough for an introduction without too much to take the cream off a real course in insurance. The subject of interest and annuities, however, is handled in such detail that further work upon the subject might not be needed.

The work is entirely formal, that is to say, no reference is made to economic conditions which affect the real rate of interest. The question, for instance, of the price level is not mentioned. No theory of interest can be other than mere form, without substance, apart from a discussion of the effect of a change of price level upon the investment yield, both as to principal and interest.

In discussing the valuation of mining properties the author says: "When a sum of money is loaned the person making the loan not only receives interest at a stipulated rate at the

end of each year, but at the end of a stated period he receives his original capital back again in full. There are, however, some forms of investment where the original capital is not returned to the investor. In such cases provision must be made for the redemption of the capital by setting aside some portion of the annual income as a redemption fund. A mine is a typical form of investment," etc. Now there is very serious objection to all this great detail and clearness on a subject which is not at all clear. You can not value a mine properly unless you know the price at which the product will be sold, and even then unless you know the amount of ore the mine contains, and the difficulty or ease of mining it. The impression is given that the mine will run out; what justification have we for such an impression? In the case of porphyry deposit of copper, where the total tonnage can be properly estimated, we can perhaps undertake to find some value of a mine. In the case of vein mines, however, there is no such possibility. Some mines have been worked for hundreds of years and are apparently richer to-day than ever before (Tintos, for example).

Moreover may it not be the rule rather than the exception that capital is not returned?

The average price level has risen so rapidly in the last fifteen years that a person who put his money out on loan fifteen years ago and received it back now, would have, in purchasing power, not more than one half to two thirds of that which he loaned. For the author, he would have his original capital back in full. From an economic point of view, he would have a very highly depreciated capital returned to him. He would be no better off than if he had invested in a mine, that was a mine, fifteen years ago—probably much worse off.

We realize fully that it is not in the province of the elementary book which Skinner has written to go into every sort of detail in regard to investments, but it does seem to us as though a short account of the bearing of the major economic phenomena upon investment should be included.

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Prehistoric Man and His Story. By PROFESSOR G. F. SCOTT ELLIOT. London, Seeley, Service & Co., 1915. Pp. 16, 398; illustrations and diagrams 64.

This is the second book by British authors on the general subject of prehistoric man to appear in 1915. The present volume however differs so widely from the one by Sollas that there is room for both. Besides the work by Elliot includes chapters on the neolithic period and the age of metals. Both agree in devoting much space to a comparison between prehistoric archeology and the ethnology of living primitive races.

In the initial chapter, on the preparation of the earth, it is pointed out that remains of lemurs have been found in the Eocene of North America and Europe, and the question is raised whether a "generalized lemur-monkey-man" could have lived at the time. If so he could have wandered all over the northern hemisphere from San Francisco to New Jersey, also from England to Japan. The climate was warm but not oppressively hot. As to food the land would have been considered a paradise by any living primitive race. The Miocene descendants of the common Eocene ancestor would have had to contend with carnivorous animals.

A discussion of "*Homosimius precursor*" naturally leads to the question of eoliths. These are flints of various ages which "have certainly been struck or chipped in an unusual way." While it is still not possible to say whether (or not) they were utilized by man, the author believes the evidence in favor of the artifact nature of some of the eoliths is more weighty than that to the contrary.

The next three chapters are devoted to missing links, the human body, and the limit of humanity. As one might expect, comparison of the brains of apes and of men shows considerable differences; on the whole, however, the general likeness is more striking than the contrasts. The differences between man and his Pliocene ancestor is "clearly in brain rather than in eyesight or manual dexterity."

The author is a monogenist and also adheres to the orthodox belief that the Old